

Chapter 22

How to Write a Grant to Perform Studies



Abstract Grant writing can seem to be an overwhelming and complex affair. However, it can be broken down into smaller steps such as finding grants, learning to read and screen grant requests for proposals, recruiting collaborators, preparing and submitting a letter of intent, writing an ongoing project description that can be inserted into a proposal, writing the proposal when requested, and preparing the budget. This chapter will describe how to obtain grants, whether as an individual trying to fund a research project or a nongovernmental organization, not-for-profit, or other type of organization wishing to conduct research or do service projects and education.

22.1 Introduction

The good news: Many very useful and high-quality studies can be done with little or no funds. Many, if not most, of the population studies, mechanisms of injury, and other papers by the two authors of this book have been done on our own time and were self-funded. Some research was indirectly supported by salaries that we drew from our employment (University of Illinois at Chicago and National Severe Storms Laboratory) when performance expectations included research and publications. We have also developed a network of colleagues and resources that we can call on for assistance with details and background or have the support of our current employers (Vaisala) for specific parts of our research such as lightning density maps. In general, people enjoy being asked for their assistance and advice and are especially happy if they know their support will save lives.

Most of the projects that we have mentored in other countries, which have resulted in publications and cross-connections for the authors with colleagues with similar interests, have also been done by individuals on their own time through dedicated efforts. If the project is an educational program or service project, bringing this network together may gather people with a wide range of complementary talents that can be used to make the study or project worthwhile and potentially worthy of journal publication. For example, the Lightning Safety Group in the United States is a collection of volunteers with various interests in lightning across the country

who rarely meet directly (Chap. 18). Nevertheless, they have been able to maintain and grow connections and contribute resources to the most comprehensive lightning safety website in the world at www.lightningsafety.noaa.gov.

22.2 Learning How to Write a Grant

Ideally, one learns to write a grant from mentors, an adviser or graduate supervisor, who are experienced in grant writing in your area of interest. Unfortunately, not all of us have those resources available.

There are multiple organizations that serve nongovernmental organizations (NGO), not-for-profit (NFP), and other nonprofit organizations, and many have excellent, and often free, webinars on grant writing and other fundraising methods. At the time of this writing, some of these include Firespring, FundsforNGOs, TechSoup, Nonprofit Hub, CharityHowTo, and GrantStation. Googling will often find others, and once your organization is registered with one, the others may connect with your address and begin mailing you as well.

22.3 Preparing a Grant Proposal

22.3.1 *Finding Research Funds and Grants*

With the exception of an individual student's project, which may be funded from their adviser's grant funding, the vast majority of grants are written to fit within a specific request for proposal from a grant-making foundation, government body, or other funder. A grant written as a wish with no specific funder in mind is likely to be a waste of time that could be more valuably spent searching for appropriate grants.

In order to perform a complete project, it may be necessary to have several grants for different pieces of the project. Conversely, for large projects, it may be necessary to include other agencies and NGOs as collaborators to provide the talents, labor, and expertise needed to assemble a good team that can convincingly carry out the proposed project. Currently, grant makers are shifting to results-based proposals and often require collaboration of several organizations in order to show reach and availability of requisite skills to accomplish the objectives of the grant. Theory of Change has become one of the current touted methodologies for some funders.

An undergraduate or graduate student may be able to tap into funds that their professor/adviser already has to support his/her work. Generally, a student needs funds for a short but immediate amount of time, and their adviser should be their first source for money, in-kind support, and advice. A faculty member may need financial support for travel or other costs to perform studies. Both groups may be

able to tap into departmental, dean's, or university discretionary funds or small grant programs for small amounts. An NGO, usually with longer timelines, may have more time to search for grants, supporting their operational overhead with overlaps from other grants or monies in the meantime.

There are a number of ways to find grants. University faculty should always look within their department or home institution, as many schools have grant offices of various sizes, qualities, and priorities. Grants are very important for universities to thrive and are not a burden but an opportunity. Many universities offer courses in grant writing or have personnel who can help the candidate find the keywords necessary to narrow a search, teach the candidate how to do the search, or do it for them. However, the best person to do a grant search is usually the one with the most to gain and has the best knowledge base in the area. There are groups, programs, and organizations that assemble grant proposals with subscriptions. Two of these are GrantStation (mostly United States) and FundsforNGOs, but there are many additional resources.

Networking is very important. Others in the same interest area may know grant sourcing/searching programs unknown to you. If one that you find doesn't exactly fit your goals, it is easy to forward it to contacts and organizations who might find them applicable, engendering goodwill. Grant referrals or collaborative opportunities that you can use may come back from those in your network where you sent calls for proposals.

All of this takes time and energy. It is not glamorous, but it may well be essential for your research or for the viability of your organization.

22.3.2 Formulating the Study Question: Doing Your Homework and Being Prepared

Before writing a grant, it is important to:

- Hone your research into a testable hypothesis
- Define the methodology that will define how and what data will be collected
- Identify a population or issue to be studied, laboratory to conduct the research if appropriate, essential collaborators, data analysts, and other resources necessary to carry out the project
- Prepare a budget

For NGOs, the mission and vision statements should lead to goals/objectives. These can be divided into more specific research and service projects. Background data, references, statistics, and other supporting data should be assembled to write a description for each project. As projects are finished and new ones begun, the supporting documents can be updated and expanded to support ongoing or more advanced programs that build on those already completed and to demonstrate a track record.

Any letter of intent, letter of interest, expression of interest, proposal, position paper, or grant application, whether funded or not, should become part of a database whose contents can be used in future grant applications as well as serving as documentation that the organization is capable of carrying projects to completion. It is highly recommended to look through grants that were successfully funded to organizations similar to yours by a specific foundation or agency. These are often available on the web. Of course, applications will always need to be tailored to the specific grant requirements.

22.3.3 Determining If a Grant Is a Good Fit for Your Project or Organization

There are two ways of looking at a project: from the view of those doing the project and from the view of the grant maker. The closer the match between these two views, the more likely the grant will be successful. In every case, the proposal must align very closely with the goals of the granting foundation, or it will not be considered. However, making impossible promises to fit a request for proposal and going too far afield from your organization or research project's goals and objectives will not lead to a good end.

22.3.4 Setting Criteria for Your Project/Study

The following are questions to be asked as the letter of intent and subsequent proposal is prepared:

- What do you want to accomplish or study?
- What methodology will you use?
- How long will the study last?
- What are the necessary equipment, supplies, personnel, materials, or other components?
- How many people, animals, and schools will be needed for the research?
- What geographic area will be involved?
- What are the other aspects of the project/study that are essential to bring it to completion?
- Which of all of these questions are flexible and which are not?
- What difficulties and risks do you foresee?
- What costs are involved?
- What outcomes are to be completed within the allotted time of a grant?
- If funding for essential portions of your project are excluded by the grant maker, where will you find funding for these?

22.3.5 *Reading the Request for Proposal (RFP)*

Whenever an announcement, grant link, or request for proposal (RFP) is found that may be a potential fit, the first step is reading the RFP *carefully* to see if you or your organization qualifies, is large or small enough, has the required track record and expertise, and works in the funded geographic area and other important requirements. Part of reading the proposal is also evaluating if it fits the goals of your project or organization, as in Table 22.1.

Most of the points in Table 22.1 are self-explanatory. However, finding the grant that is the best fit for the project or topic you propose may not be straightforward. You need as close a match as possible, but you will never find a perfect fit. Sometimes your question can be answered within the larger framework of the RFP vision. For instance, an RFP may be tailored to climate change and resilience in Africa, making the people more able to withstand climate and weather threats. In this example, the following are some directions that may be taken:

1. If your project is to determine the effect of lightning injuries over the past decade, a grant to survey several different weather threats to farmers, including lightning, may be more readily fundable since it covers a broader topic area for the RFP to cover.
2. If instead, you are interested in delivering public education to prevent injuries and enable villagers to carry out their normal activities without as much fear from lightning, doing a baseline study to assess injuries, beliefs about lightning, and other factors will help to develop the educational programs, which can be delivered to the schools, parents, or local population and then assessed for its effectiveness.
3. If you are interested in lightning detection, you may be able to write the grant to use lightning as a proxy for severe storms that destroy crops. Including collaborators, advisors, or mentors who are familiar with farming in the region may make your proposal more presentable.

Although it may be determined that everything else fits, the last two items in Table 22.1 may eliminate an application. For NGOs, sometimes pre-proposal work

Table 22.1 Considerations in reading a request for proposal

Work or research topic to be covered
Time period to be covered
Other exclusion criteria
What will be funded – or not funded
Need for partner documents, track record
Other requirements
Submission deadline
Amount of pre-proposal work that must be completed

completed for other projects can be modified and used again. Existing support letters, signed documents, and other materials will need to be updated with the new date, title of the project, addressee, and grant maker along with permission of the collaborators to use for the new project.

22.3.6 *Ongoing or Multiple Projects*

More complex organizations may find it useful to assemble a grant decision matrix, grants calendar, and grants pipeline. A grant decision matrix is a scoring tool that can help organizations triage which RFPs are worth pursuing with an application. Table 22.2 provides some considerations that will help in developing a letter of intent and possible subsequent proposal.

The criteria, rating system, multipliers, and decision score action distribution such as the example in Table 22.3 are all for the use of the NGO, and there are no right answers. The categories can be chosen to suit the NGO, the grant writing team, the NGO's Board of Directors, or other appropriate agents, and should probably be followed and revisited periodically, particularly if they are not found to be good predictors of success. However, this self-rating needs to be honest so that the evaluation is not unduly optimistic or pessimistic. Some criteria, such as eligibility, may be considered "absolutes" and inappropriate to put in the matrix.

Table 22.2 Hypothetical grant decision matrix

Decision criteria to be rated	Excellent			Poor	Multiplier	Score
	0	1	2			
How well does it fit the NGO's mission?	0	1	2	3	3	x
How well does it serve target population?	0	1	2	3	3	x
Eligibility	0	1	2	3	5	x
Timing of letter of intent	0	1	2	3	3	x
Timing of proposal if invited to submit	0	1	2	3	2	x
Available/qualified staff	0	1	2	3	3	x
Will grant funds be adequate?	0	1	2	3	3	x
Matching funds required?	0	1	2	3	3	x
Administration costs allowed	0	1	2	3	3	x
Other criteria	0	1	2	3	2	x
Total						X

Table 22.3 Action based on decision matrix score (fitted to your NGO)

Score	Decision
0–30	Apply
30–50	Refer to director for further discussion and consideration
50–75	Reject

A grants calendar can be as simple or as complex as needed and can take on layers depending on how many letters of interest and grant submissions are being prepared. For simple grants, a calendar with task completion, editing, assembly, and submission dates may be all that is necessary. For large projects, where NGOs are writing many letters of intent and subsequent grants at the same time, each letter and grant will need its own work matrix or Gantt chart which may drive the work of several team members and contributors. An overall summary chart will be essential to make sure that everyone is doing their portion and that no one person is overwhelmed with too many project pieces coming due simultaneously.

22.4 Other Considerations

This chapter cannot begin to be a complete tutorial in grant writing, but here are a few other pointers:

22.4.1 *Definitions*

Make sure you know the meaning of the terms the grant maker is using. Do not assume a common or older definition applies. This is true for administrative factors such as bookkeeping, NGO registration, and audits for technical scientific or analytic terms and especially for current trigger words such as climate change, resilience, sustainability, etc. Trigger words are especially important to repeat throughout the proposal, although they should be used accurately and appropriately.

22.4.2 *Methodology*

If a certain methodology is required for the application or evaluation of the outcomes of your project, do your best to become familiar with how it is applied. It may be useful for the next time you write a grant.

22.4.3 *Content Readers*

Depending on the complexity of the proposal, it may be desirable to have a content area reader read the proposal for technical accuracy, statistics, and methodology. Someone who is familiar with the NGO's mission and projects should read the grant for flow and agreement of the points presented, to decrease repetition and to suggest visual interest (pictures, graphs, colors). Before the final copy is submitted, another

reader should read the proposal for grammar, spelling, and organization before the final checklist of proposal components is assembled and rechecked. If funds are available, use a professional grant reviewer.

22.4.4 Relationships

When possible, build a connection with a person within an organization that may be related to your needs for funding. Respectfully request a grants manager to provide information on when the next round of grant solicitations is likely to be issued and the general terms that may be included. Typically, a grants manager relies on a committee to decide on the merits of submitted letters of intent as well as the proposals that are submitted. Some of the same committee members may serve on panels for different organizations, so be sure that a quality letter of interest is provided that fits the grant guidelines. In addition, the grants manager may be able to determine quickly that a letter of inquiry is not relevant for that organization but may know of others in the grant community that are a better match.

22.4.5 Timeliness and Word Count

Late submissions or those exceeding the designated word count may be immediately rejected. Submit a letter of intent or proposal several days before the due date to be sure that any communication issues, local holidays, and weekends are taken into account. For hard copies that are mailed, a trackable mail system should be used. For those submitted electronically, a delivery receipt and a read receipt can be requested so that the grant writer knows their work has been safely delivered.